

polynuclears, and a considerable number of lymphocytes. This coincides with the results of others that polynuclear cells are replaced by lymphocytes. In spinal cocainization with absolutely aseptic solution, polynuclear cells appear numerous enough to render the fluid turbid. They are replaced in a few days by lymphocytes, which eventually disappear. Thus an irritating but aseptic irritation of the meninges by the bloody solution just as by cocaine when used therapeutically causes the appearance and disappearance of the two types of leucocytes.

NOYES.

PATHOGENESIS AND PROGNOSIS OF TABES. M. Faure (Journ. de med. de Bordeaux, Aug. 16, 1903).

In the opinion of this author syphilis does not play the important part usually assigned to it in the causation of tabes. Other infections and intoxications or simply physical or moral shock, mental strain, or privation must be considered as etiological factors in the disease. Though the majority of tabetics have suffered syphilitic infection, the symptoms of tabes first appear in many such subjects after other infections and intoxications. It may be said that in 60 per cent of the cases, no matter what the treatment, tabes is arrested in the early stages; or its evolution is so slow that its effect upon the duration of life is very slight. In but 30 per cent does the disease progress so rapidly as to justify the grave prognosis formerly given in this condition. Five per cent of the cases are clinically cured, while a like number progress rapidly and fatally, and their course is marked by fever and symptoms of infection. This febrile form of tabes has not hitherto been described, and runs a short course of a few months to two years.

JELLIFFE.

THE PROGNOSIS OF TABES. Joseph Collins (Medical News, August 29, 1903).

The symptoms of tabes are classified in (1) the pre-ataxic stage; (2) the ataxic stage; (3) the profoundly incoördinate and hypotonic stage, often spoken of as the paralytic stage. The duration of these stages varies. In 140 cases of the author three years and five months elapsed between the first symptom of the disease and the appearance of the ataxia, but the period of five years is more probably correct.

The factors that influence the prognosis are (1) the clinical type of the disease; (2) what may be called the anatomical type of the disease, i.e., whether lumbar or cervical; (3) sex and age; (4) the individual, his occupation and the treatment. The prognosis is most favorable in the cases of a motor type, especially since the introduction of the Fraenkel system of exercises, and orthopedic apparatus. It is unfavorable when severe disturbance of the urogenital system and trophic symptoms are early and conspicuous manifestations. The prognosis is worse in cases of sudden onset, and better in cases of slow and insidious onset. The presence of recent syphilis is a serious factor due to the changes in the blood vessels. Cervical and cervico-bulbar tabes has a serious prognosis, also early involvement of the nerve supply of the larynx. The course of the disease is more rapid in women, in young tabetics, under thirty-five years of age, and in those whose occupation necessitates standing or fatiguing use of the legs. The pronounced cases common twenty-five years ago, are seldom seen today in private practice, due probably to improved methods of treatment.

W. B. NOYES.

OSMIC ACID IN TRIGEMINAL NEURALGIA. J. B. Murphy (Journal Am. Med. Assoc., Aug. 22, 1903).

An additional case of this complaint treated by the intraneural injection of osmic acid after the method of Bennett, of London, is reported by J. B. Murphy. The patient, a man of seventy-six years, presented a trigger..

inal neuralgia of long standing, resistant to ordinary treatment and incapable of radical operation on account of the general debilitated condition. The injections in this case were given under ether anesthesia, the nerve being exposed directly over its foramen of exit and from 5 to 10 minims of a 1.5-per-cent solution of osmic acid injected with a hypodermic needle into its substance. A small amount of the solution is also injected between the nerve and its sheath in the bony canal, but care must be taken that none of the fluid gets on the skin. Recovery was uneventful and the wounds healed by primary union. No recurrences of pain have been noted at any time since the operation. The author thinks that the acid probably acts by producing a degeneration of the nerve on the proximal side of the injection, toward the ganglion, rather than by causing a local destruction of the nerve and its terminal filaments. He thinks the former is more likely, because the pain does not subside completely immediately after the operation, as it does when the peripheral nerves are cut, and as it would if the osmic acid produced only a local destructive effect. Instead it subsides slowly and gradually. Moreover, the relief from pain is permanent, which is not the case after peripheral resection. A number of experiments on dogs is now being conducted by the author, which, it is hoped, may throw some light on the changes which take place after the injection.

JELLIFFE.

CURABLE FORMS OF MENINGEAL HEMORRHAGE. A Chauffard, Froin and Boidin (*La Presse Méd.*, June 24, 1903).

Lumbar puncture in diagnosis of meningeal hemorrhages shows that subarachnoid hemorrhage is more frequent than formerly supposed, and is sometimes cured. Six cases are reported by the writer which were terminated by recovery, in which they were able to study series of cytological and chromatic changes in the cerebrospinal fluid. *Case 1.* Aged twenty-seven with normal previous history, suffered an apoplectic stroke without premonitory symptoms, characterized by loss of consciousness, with right hemiplegia and aphasia. She recovered gradually, though with difficulty of speech, and weakness in the right arm for a time. Lumbar puncture was made the third day of the disease, and a bloody fluid was withdrawn in large amount with few leucocytes. The fluid precipitated in the centrifuge with a red clot. A second lumbar puncture on the eighth day of the illness, was made, and fluid of a golden yellow color was withdrawn, with a few red and white cells. A third puncture made on the fifteenth day, was a very pale yellow, and contained few blood cells. A fourth puncture on the 29th day showed a normal fluid.

A second case characterized by sudden loss of consciousness, followed by mental alienation, a slight general state of contracture, but no convulsions or paralyses, exaggerated knee-jerk, Babinski reflex present; no trouble with sensation, no Kernig's sign, or vomiting, but slight stiffness of the neck. Retention, later incontinence, of feces and urine, were present. No albumen, but sugar was present. Lumbar puncture showed bloody cerebrospinal fluid. Two successive punctures showed diminution of blood. In this case the diagnosis was only made by means of the lumbar puncture. In these two cases hemorrhage had taken place into the subarachnoid space. In the series of examination of centrifuged fluid from the different punctures, showed much bloody fluid in the beginning, which became lighter in color. Red corpuscles became fewer, but the lymphocytes more evident. In some reported cases the leucocytes were absent in the beginning, then polynuclear forms, and finally chiefly lymphocytes, were found. In cases of meningitis a correspondence between the clinical symptoms and the cytological changes may be observed.

W. B. NOYES.